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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,619	03/16/2004	Yo-Shen Lin	CMDP0008USA	2618
27765	7590	04/20/2005	EXAMINER	
NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)			HAM, SEUNGSOOK	
P.O. BOX 506			ART UNIT	
MERRIFIELD, VA 22116			PAPER NUMBER	
			2817	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/708,619	LIN ET AL.	
	Examiner	Art Unit	
	Seungsook Ham	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 2-4,6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: L111 (fig. 11, paragraph [0026]). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 13 is objected to because of the following informalities: "the capacitor" should be corrected to --the first capacitor--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida et al. (US '689).

Uchida et al. (figs. 1A-4) discloses a lumped-element transmission line comprising: first and second inductors L1 , L2 electrically connected to the first inductor in series, and the first and second conductors are spiral in shape and oriented in the same direction that a mutual inductance between the first and second inductors is positive and equals a first value (see fig. 4 and col. 5, lines 44-49); a first end 13 of a first capacitor 10 is electrically connected to a ground and a second end of the first capacitor is electrically connected to the end of the second inductor.

The subject matter of claim 10 is inherent from the device of Uchida et al. since the claimed subject matter is identical to the device of Uchida et al.

Regarding claim 11, Uchida et et al. also teaches the gap between the first and second inductors is adjusted to obtain a desired mutual coupling/inductance (col. 5, lines 23-28).

Regarding claim 12, Uchida et al. (fig. 1A) shows at least one inductor L1 formed on a plurality of layers of the multi-layered substrate (i.e., laminated, col. 2, line 20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (US '689) in view of Sakamoto et al. (US '656).

Uchida et al. is applied as above. Uchida et al. also shows the first and second inductor disposed on the same layer (figs. 8A and 8B) and connected serially at an end. However, Uchida et al. does not show the first inductor is connected through a first via. However, using a via to connect inductors are well known in the art. Sakamoto et al. (fig. 3) discloses first and second inductors 16, 22 connected through a via.

It would have been obvious to one of ordinary skill in the art to use a via to connect first and second inductors in the device of Uchida et al. since such design technique is well known in the art as shown by Sakamoto et al.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (US '689) in view of Lo (US '925).

Uchida et al. does not show the device can be made on a LTCC substrate. Note that Uchida et al. teaches using a ceramic-based substrate for the device (col. 11, lines 4-8).

Lo discloses advantages of using LTCC substrate for a multi-layered substrate device (col. 1, lines 22-33).

It would have been obvious to one of ordinary skill in the art to use LTCC substrate for the device of Uchida et al. to reduce the size and the cost of the device as taught by Lo (col. 1, lines 22-33).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (US '689) in view of Phillips, Jr. (US '400).

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Uchida et al. does not show using plurality of plates for the first capacitor.

However, such design technique is well known in the art. Phillip, Jr. (fig. 1) discloses a multi-layered substrate having a capacitor formed by using plates.

It would have been obvious to one of ordinary skill in the art to provide a plurality of plates to form the first capacitor in the device of Uchida et al. since such design technique is well known in the art as shown by Phillips, Jr., and it also requires a routine skill in the art.

Allowable Subject Matter

Claims 2-4, 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smith et al. discloses a side-by-side coil inductor;

Kim et al. discloses a laminated LC filter with both positive and negative mutual inductances; and


Wheeler (fig. 1b) and Kameya (col. 1, lines 6-11) disclose a low pass filter having positive mutual inductance.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Seungsook Ham
Primary Examiner
Art Unit 2817

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